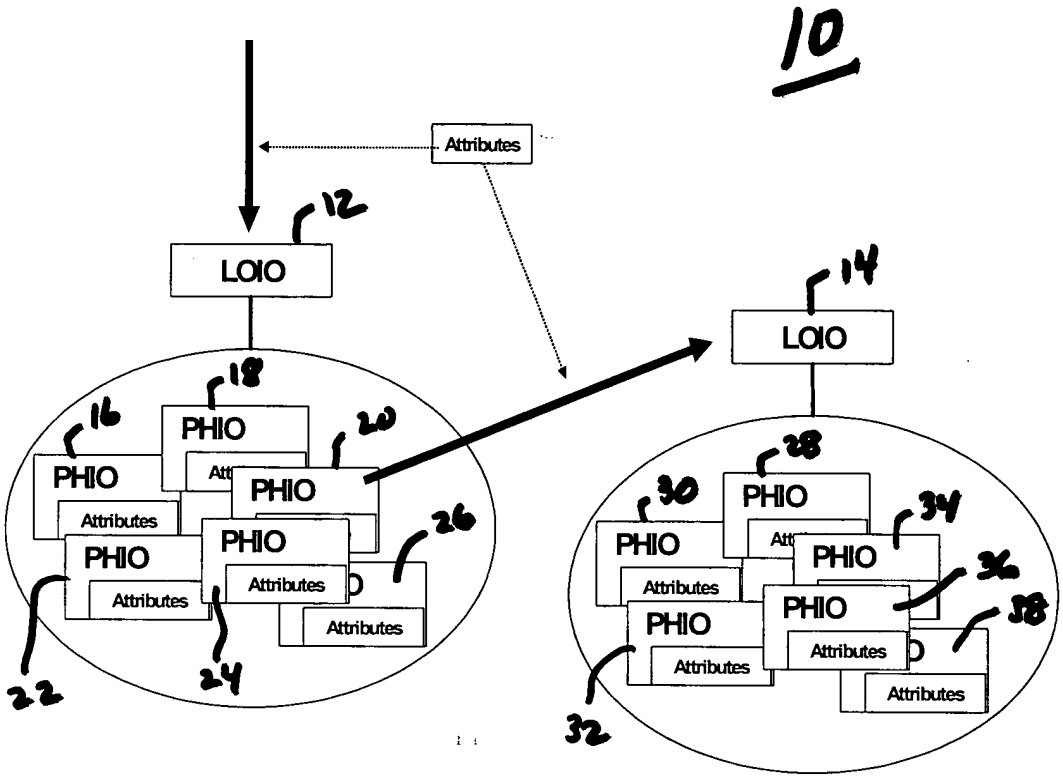

10
Attributes
12
LOIO
14
LOIO
16
PHIO
18
PHIO
20
PHIO
Attributes
PHIO
Attributes
PHIO
Attributes
26
22
24
28
PHIO
30
PHIO
34
PHIO
Attributes
36
PHIO
Attributes
38
Attributes
32

FIG. 1

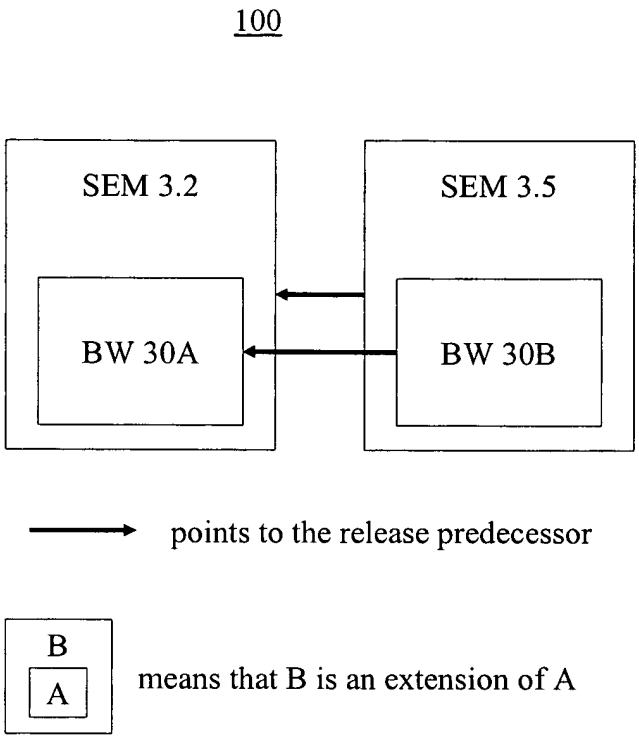

100
SEM 3.2
SEM 3.5
BW 30A
BW 30B
points to the release predecessor
B
A
means that B is an extension of A

FIG. 2

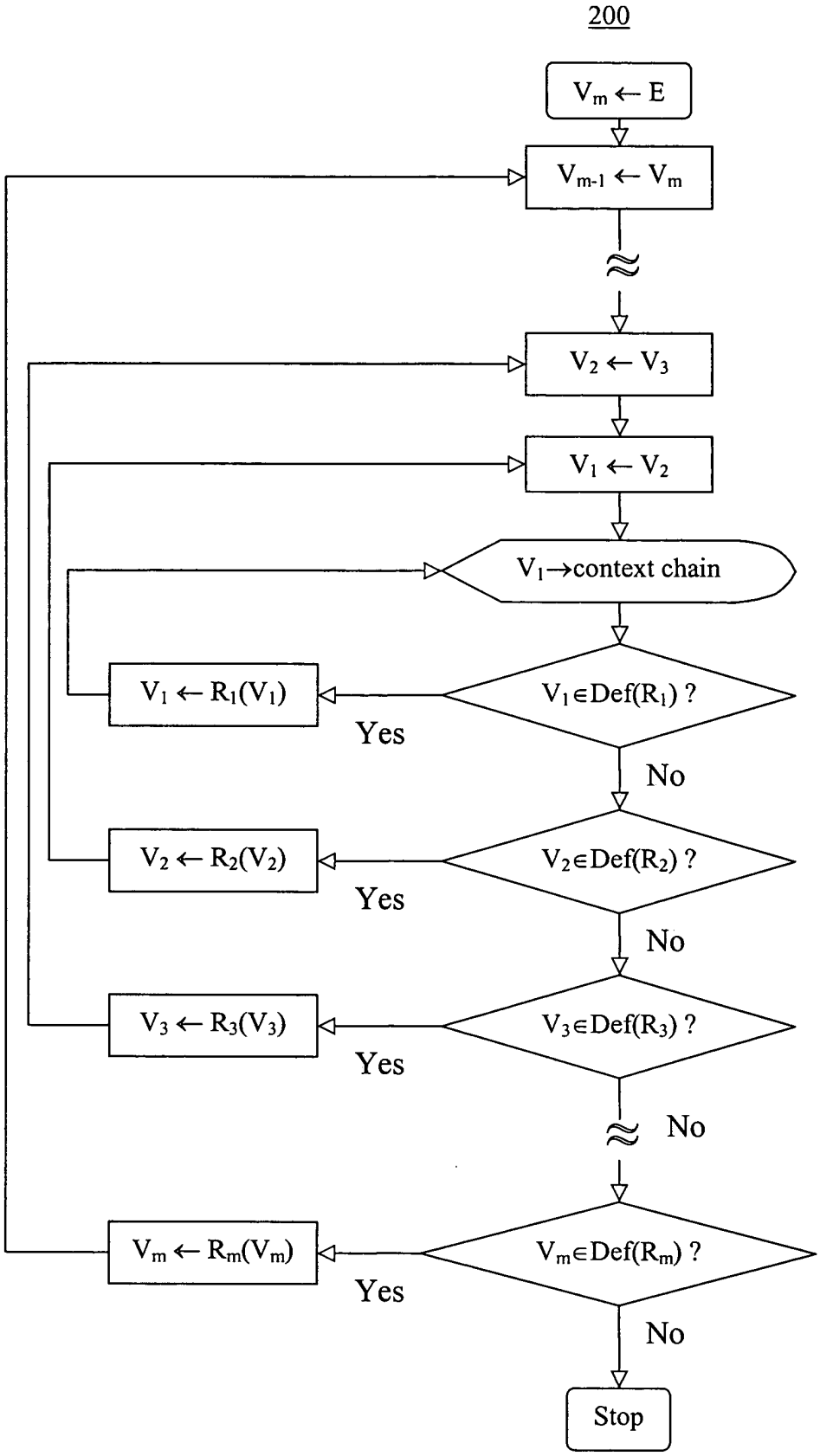

200
$V_m \leftarrow E$
$V_{m-1} \leftarrow V_m$
$V_2 \leftarrow V_3$
$V_1 \leftarrow V_2$
$V_1 \rightarrow$context chain
$V_1 \in Def(R_1)$ ?
$V_1 \leftarrow R_1(V_1)$
Yes
No
$V_2 \in Def(R_2)$ ?
$V_2 \leftarrow R_2(V_2)$
Yes
No
$V_3 \in Def(R_3)$ ?
$V_3 \leftarrow R_3(V_3)$
Yes
No
$V_m \in Def(R_m)$ ?
$V_m \leftarrow R_m(V_m)$
Yes
No
Stop

FIG. 3

| E | $V_2$ | $V_1$ | Context chain | Condition |
|---|---|---|---|---|
| (SEM, 3.5) | | | | |
| | (SEM, 3.5) | | | |
| | | (SEM, 3.5) | | |
| | | | (SEM, 3.5) | |
| | | $R_1$ | | (SEM,3.5)$\in$Def($R_1$) |
| | | (SEM, 3.2) | | |
| | | | (SEM, 3.2) | |
| | | | | (SEM,3.2)$\notin$Def($R_1$) |
| | $R_2$ | | | (SEM,3.5)$\in$Def($R_2$) |
| | (BW, 30B) | | | |
| | | (BW, 30B) | | |
| | | | (BW, 30B) | |
| | | $R_1$ | | (BW, 30B)$\in$Def($R_1$) |
| | | (BW, 30A) | | |
| | | | (BW, 30A) | |
| | | | | (BW, 30A)$\notin$Def($R_1$) |
| | | | | (BW, 30B)$\notin$Def($R_2$) |

FIG. 4

400

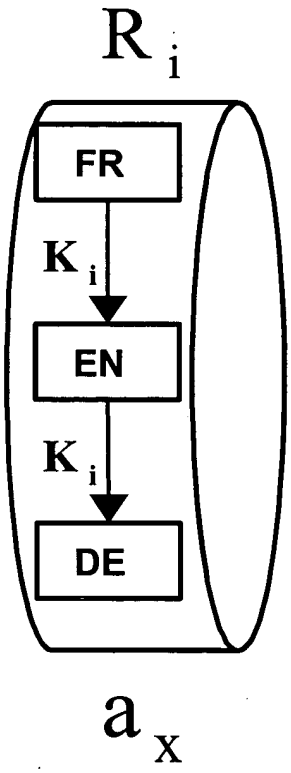



FIG. 5

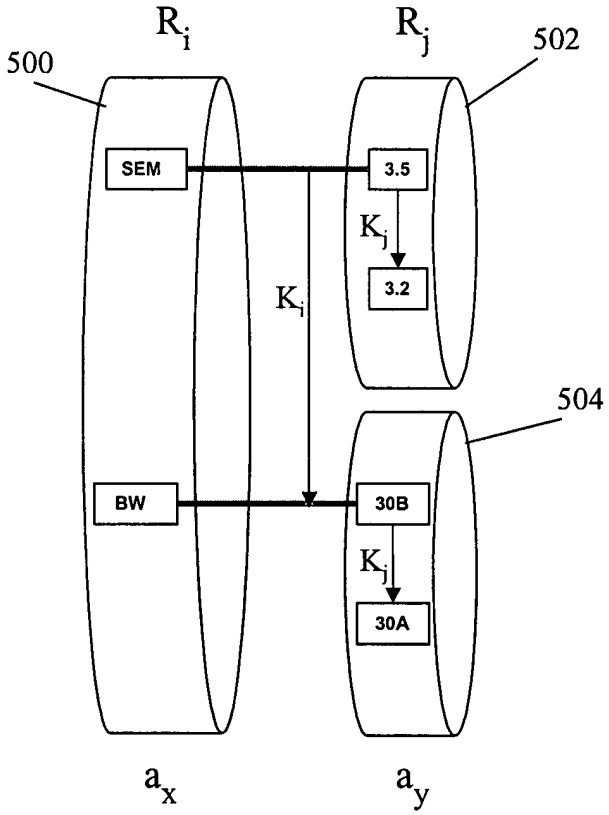



FIG. 6

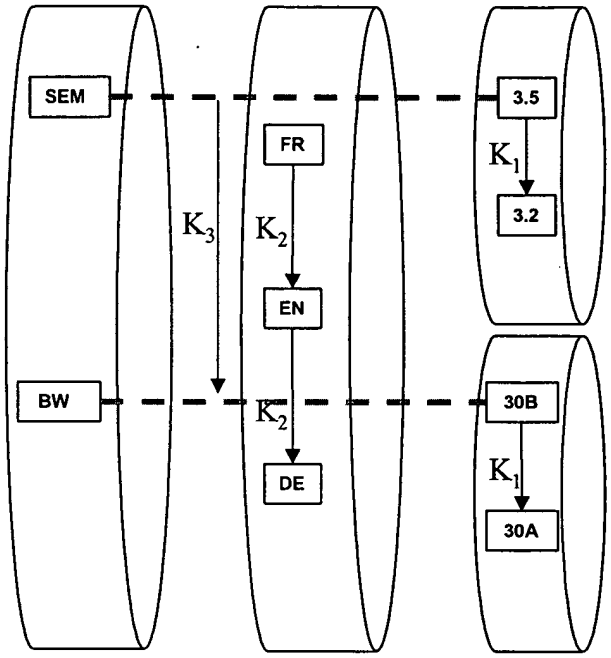



FIG. 7

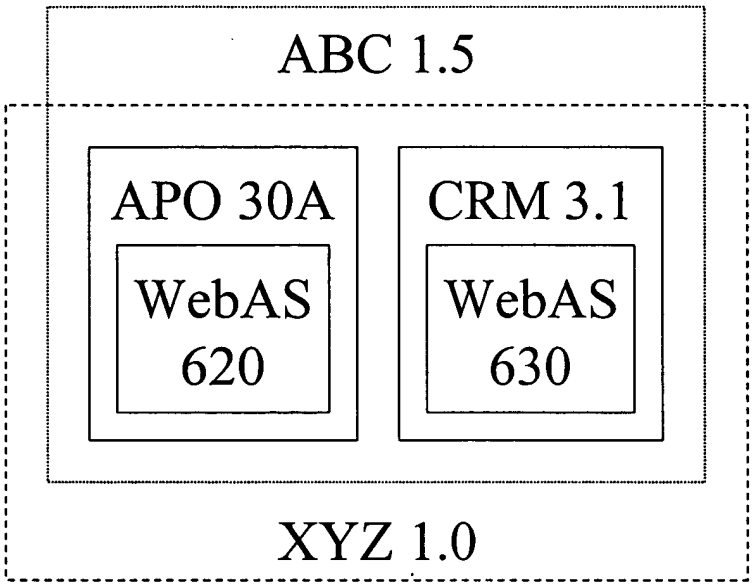



**FIG. 8**

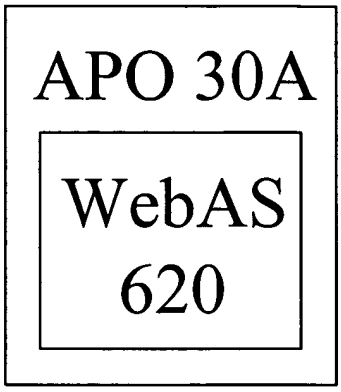



**FIG. 9**

1000

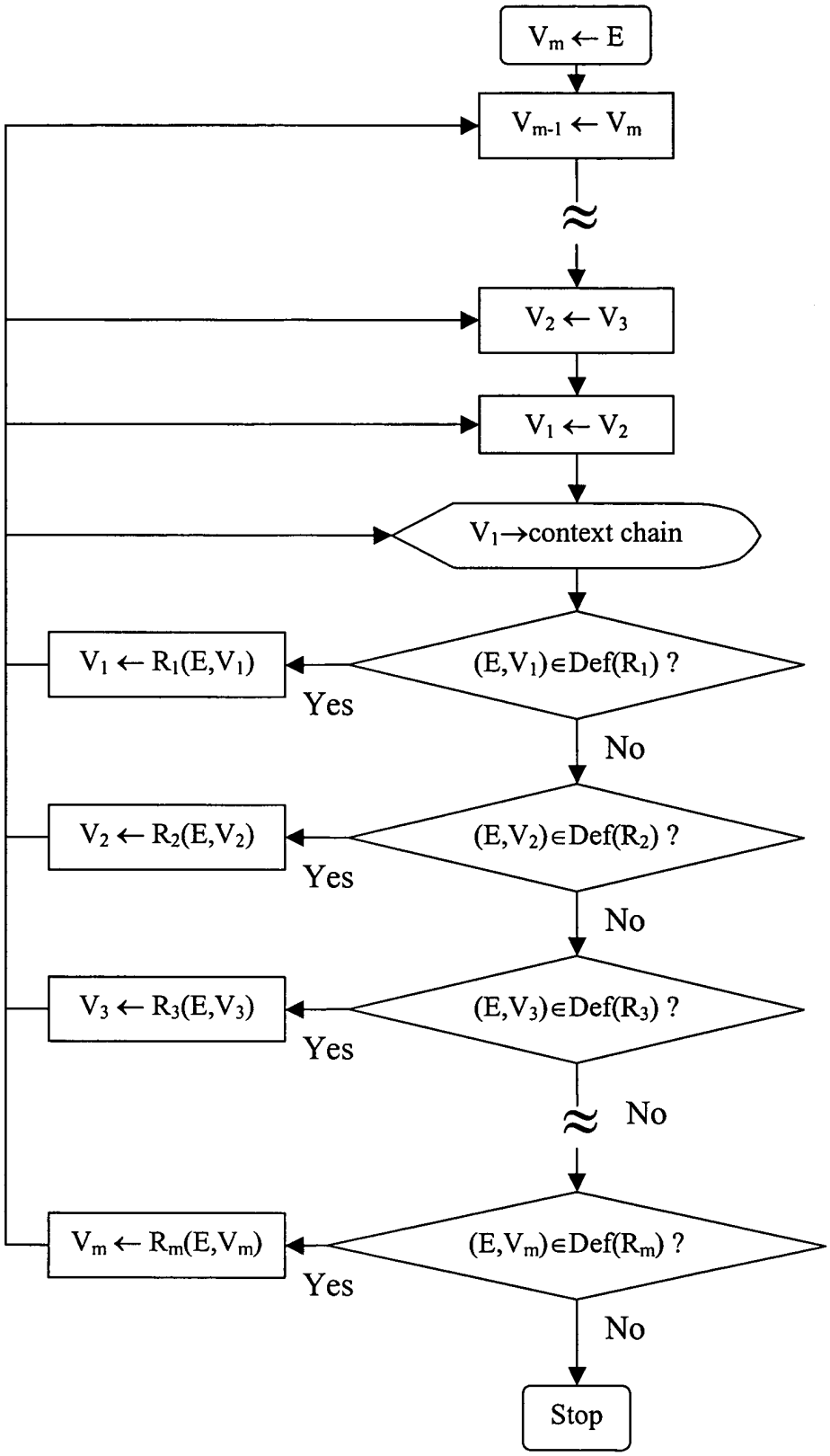

$V_m \leftarrow E$
$V_{m-1} \leftarrow V_m$
$V_2 \leftarrow V_3$
$V_1 \leftarrow V_2$
$V_1 \rightarrow$context chain
$(E,V_1) \in Def(R_1)$ ?
Yes
$V_1 \leftarrow R_1(E,V_1)$
No
$(E,V_2) \in Def(R_2)$ ?
Yes
$V_2 \leftarrow R_2(E,V_2)$
No
$(E,V_3) \in Def(R_3)$ ?
Yes
$V_3 \leftarrow R_3(E,V_3)$
No
$(E,V_m) \in Def(R_m)$ ?
Yes
$V_m \leftarrow R_m(E,V_m)$
No
Stop

**FIG. 10**

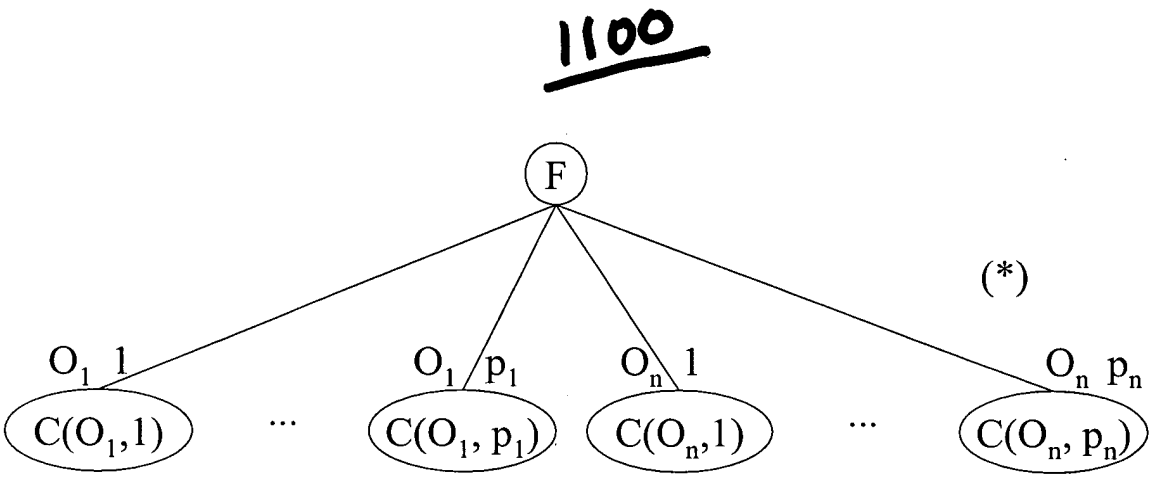



FIG. 11

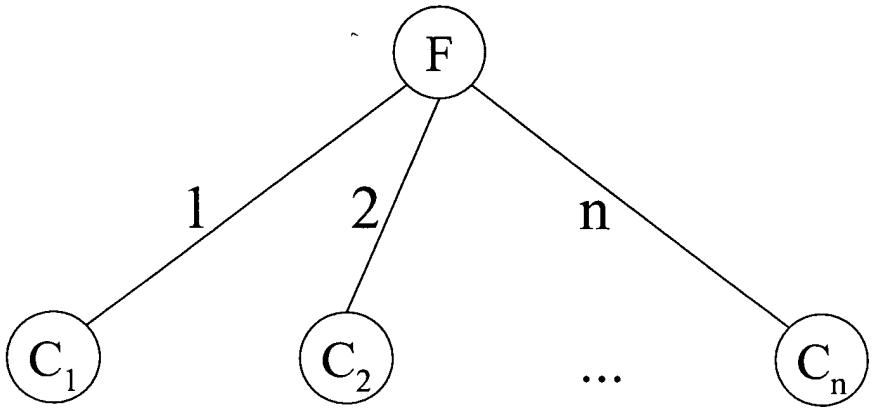



**FIG. 12**

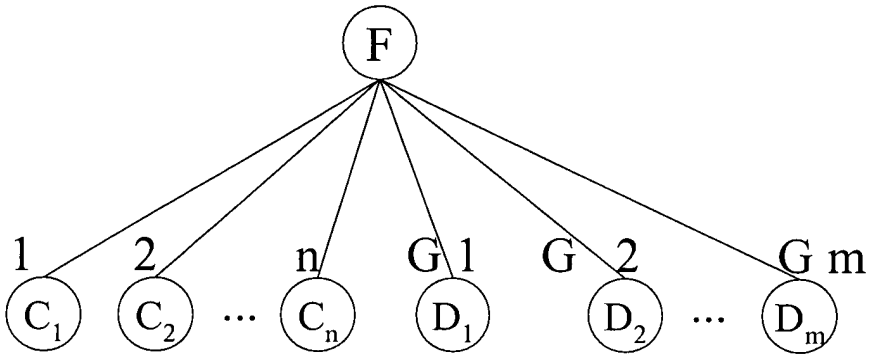



FIG. 13

MAP $R_i$

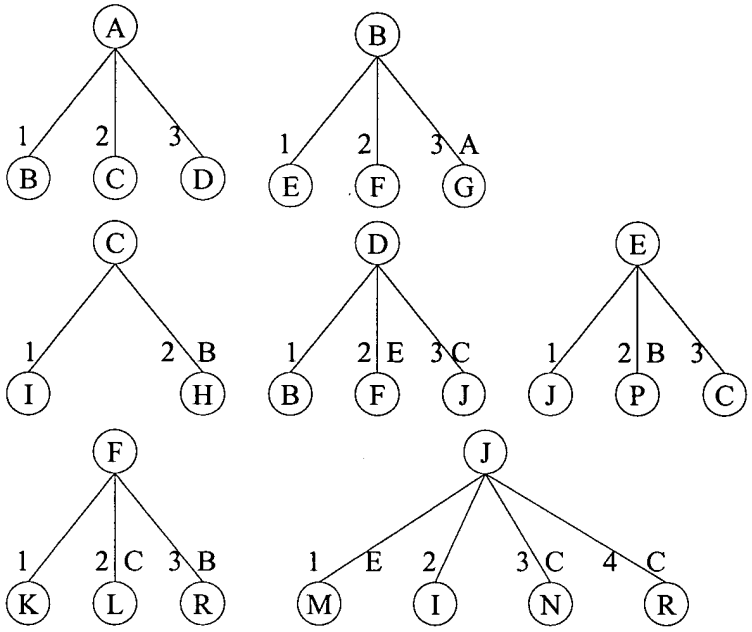
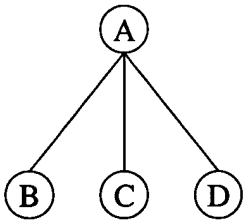

A
1 B
2 C
3 D
B
1 E
2 F
3 A G
C
1 I
2 B H
D
1 B
2 E F
3 C J
E
1 J
2 B P
3 C
F
1 K
2 C L
3 B R
J
1 E M
2 I
3 C N
4 C R

FIG. 14

*First level*:




*Second level*:

*Third level*:

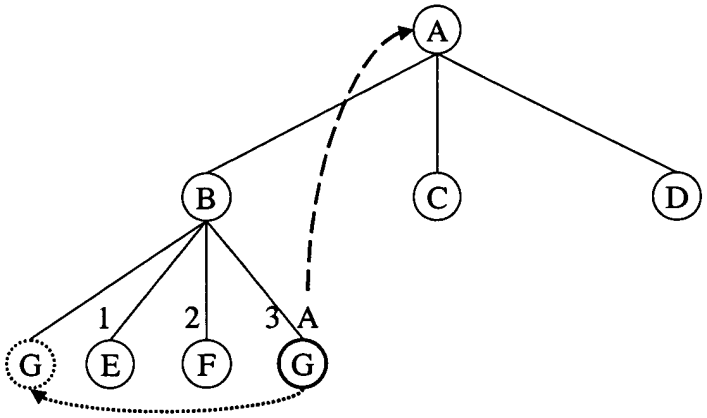



**FIG. 15**

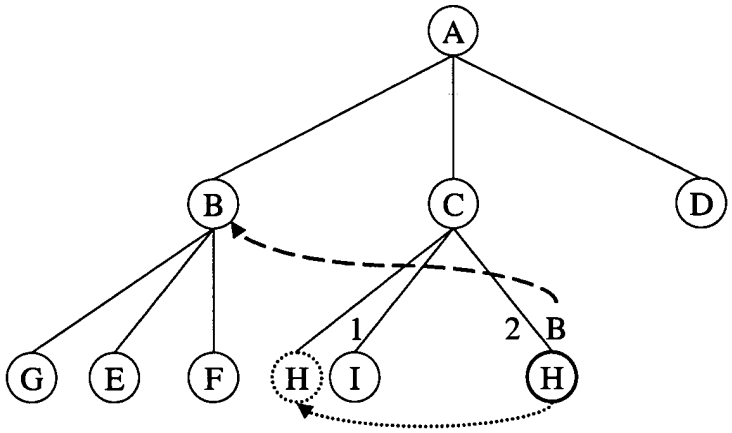



FIG. 16

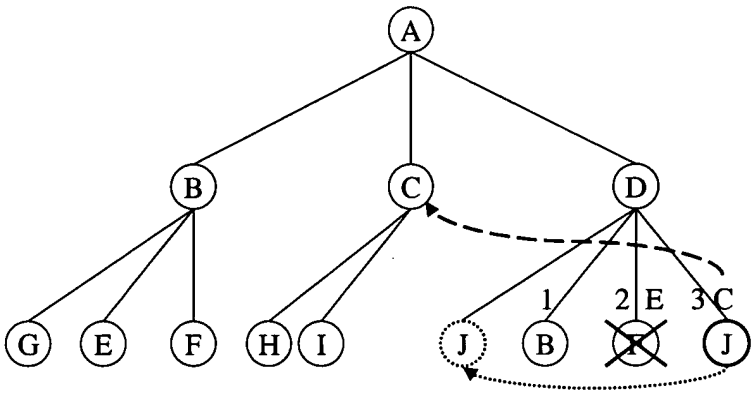



FIG. 17

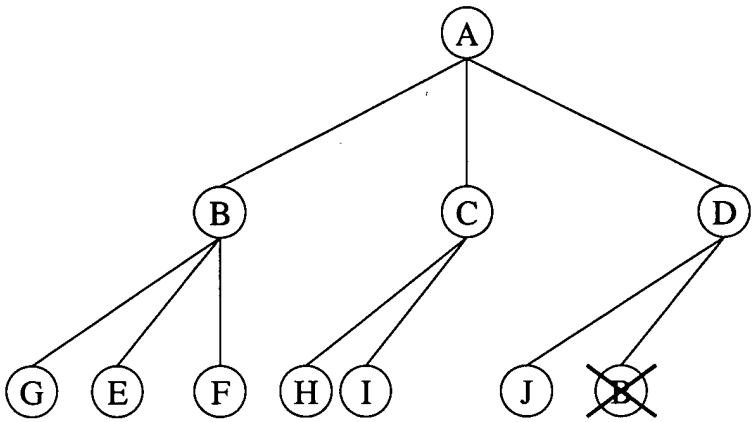



FIG. 18

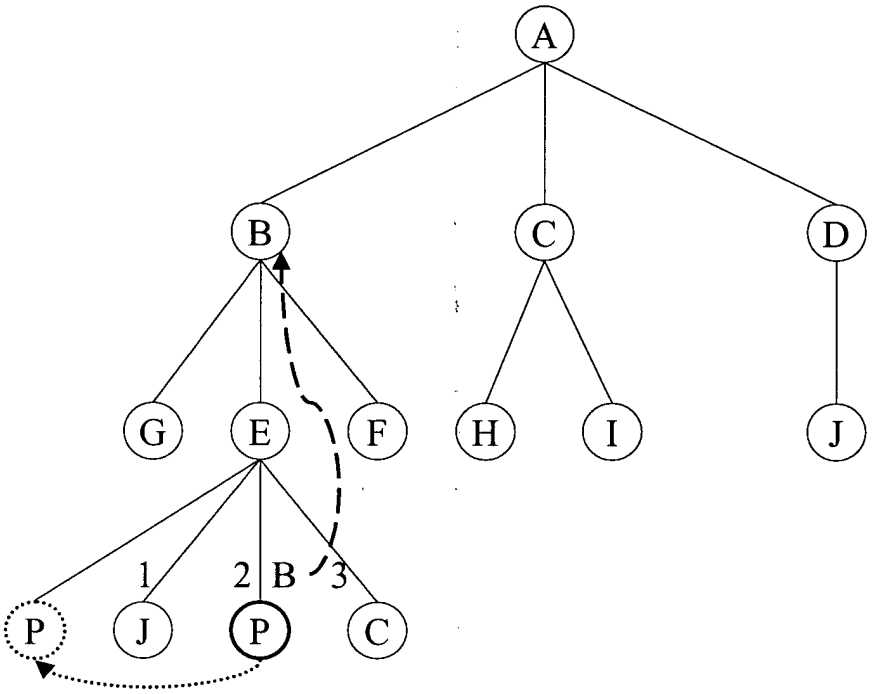



FIG. 19

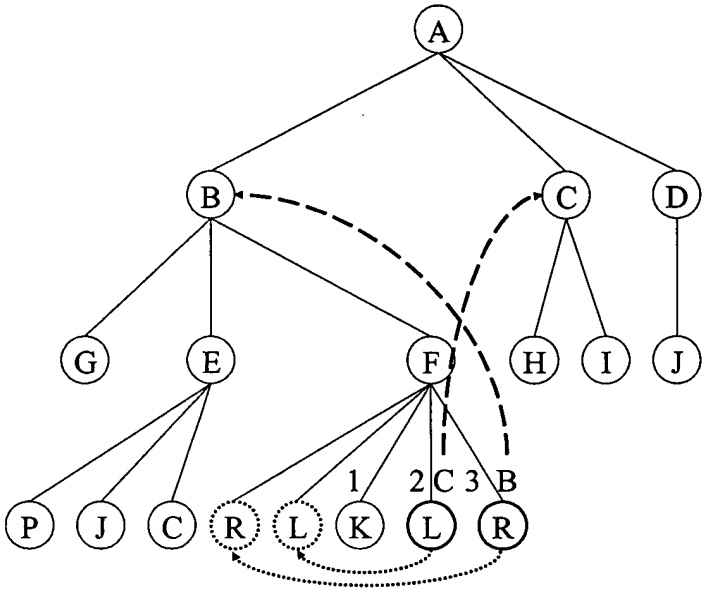



FIG. 20

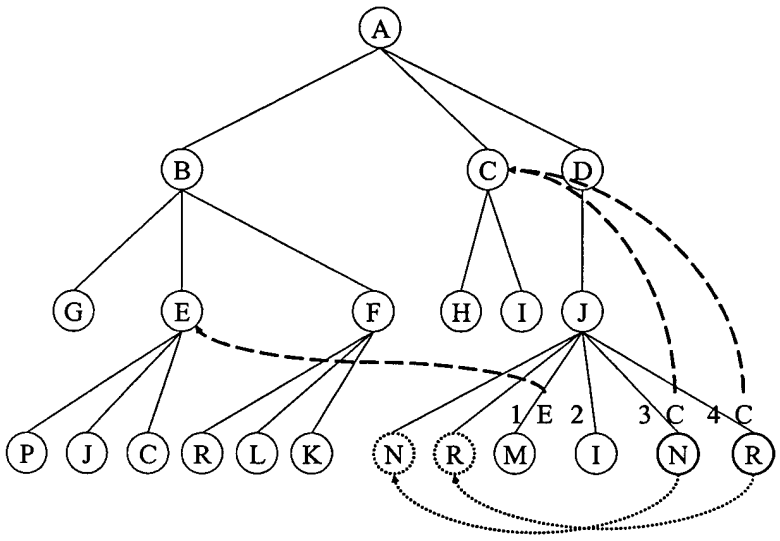



FIG. 21

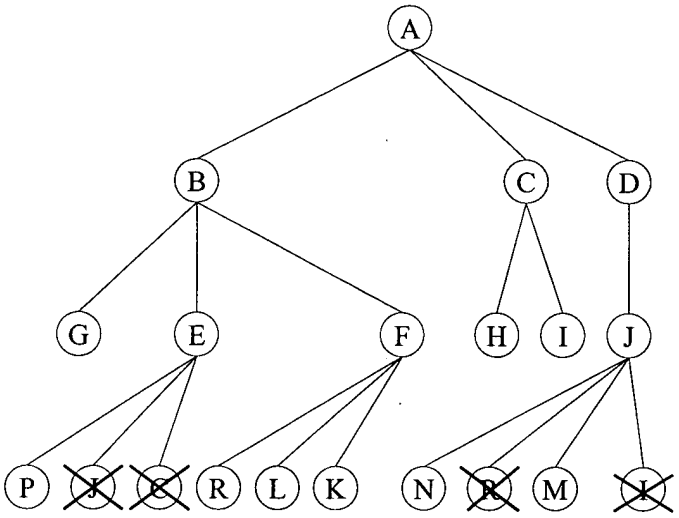



FIG. 22

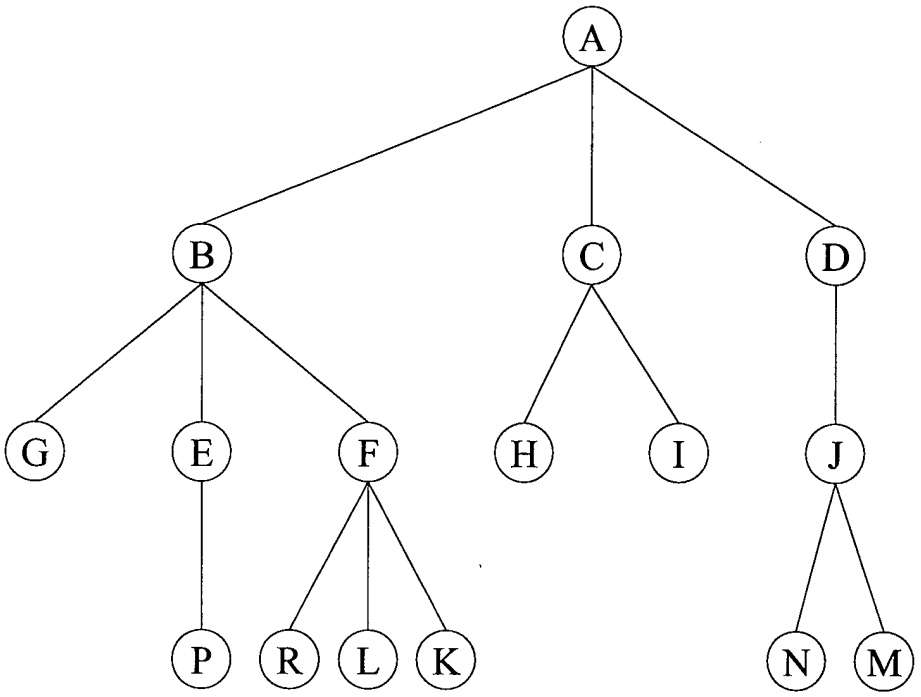



FIG. 23

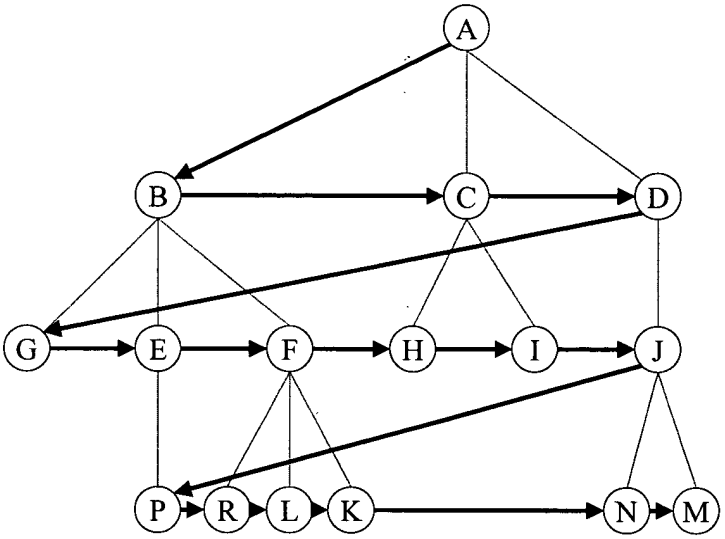



FIG. 24

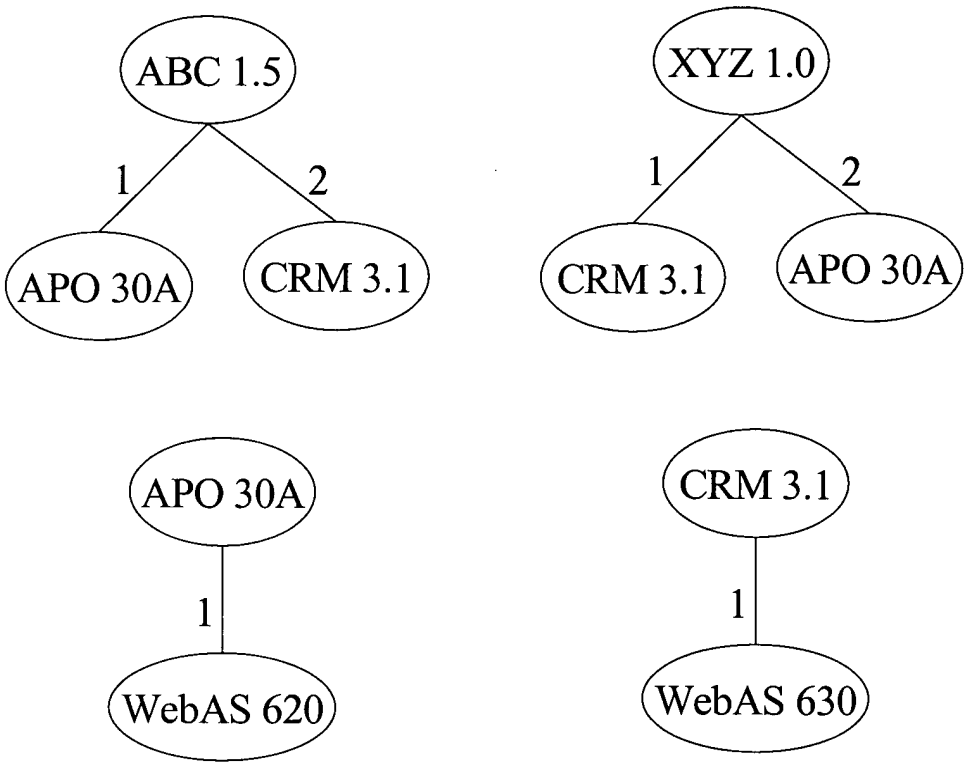
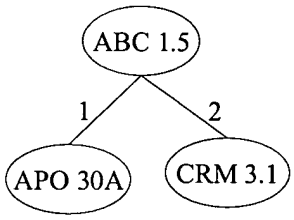

ABC 1.5
1
2
APO 30A
CRM 3.1
XYZ 1.0
1
2
CRM 3.1
APO 30A
APO 30A
1
WebAS 620
CRM 3.1
1
WebAS 630

**FIG. 25**

*Level 1*:

*Level 2*:




*Level 3*:

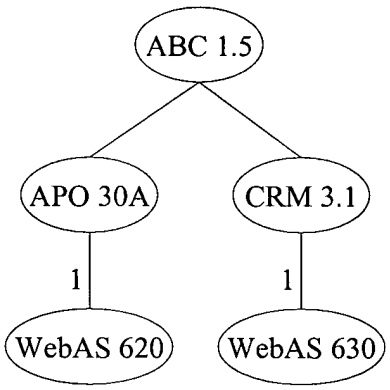



**FIG. 26**

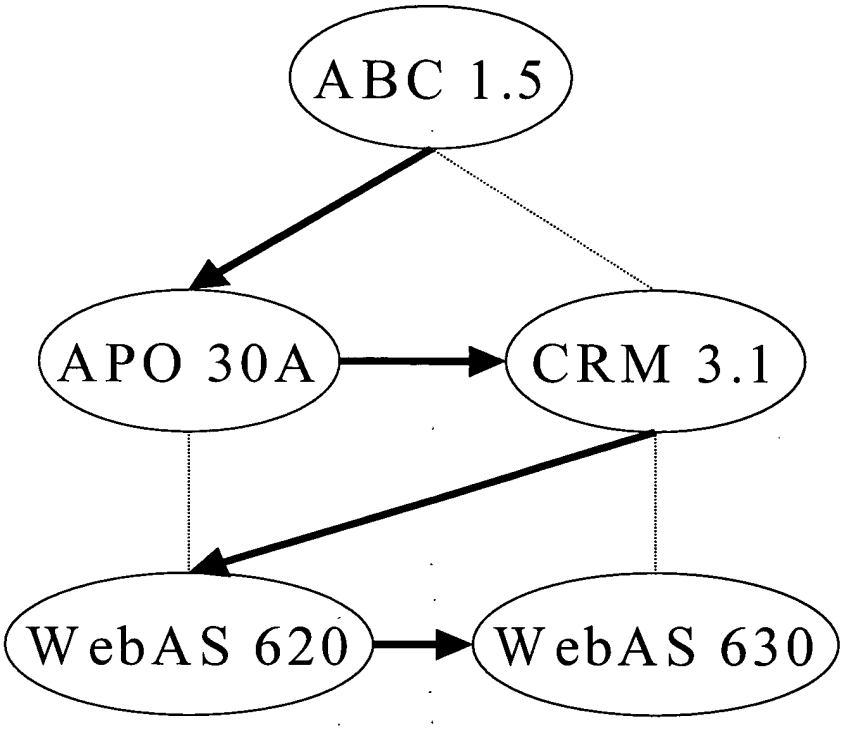



FIG. 27

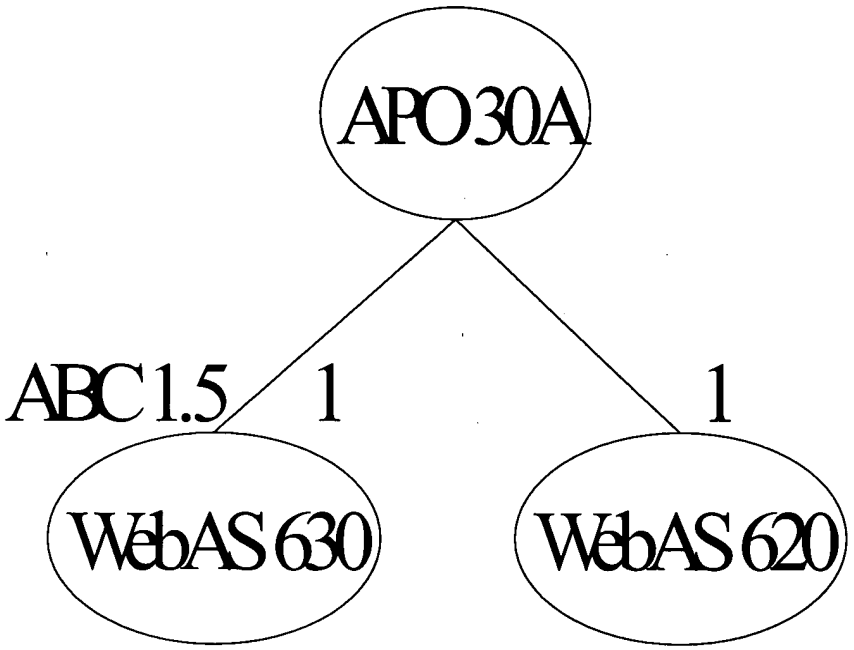



FIG. 28

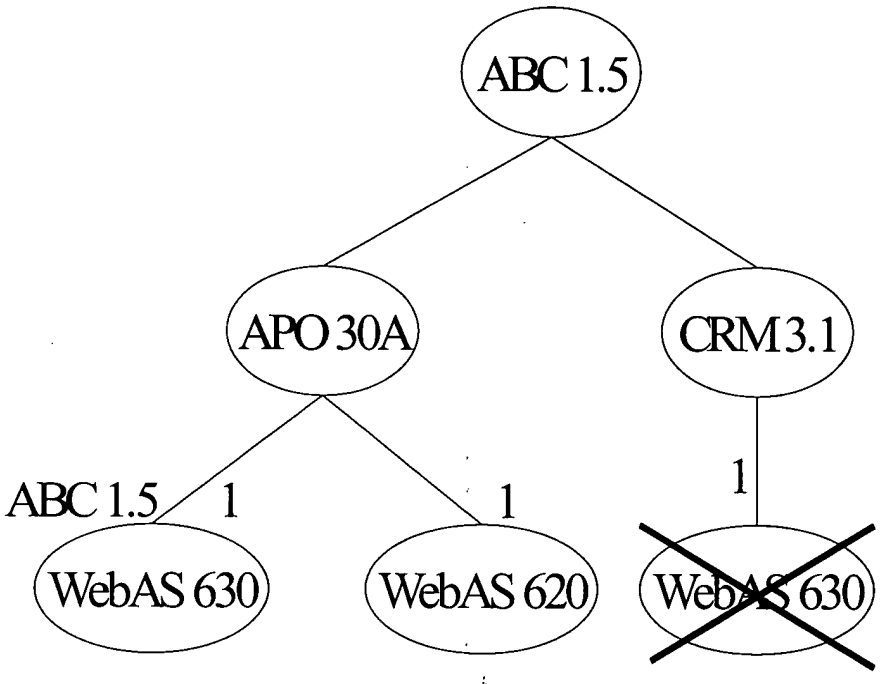
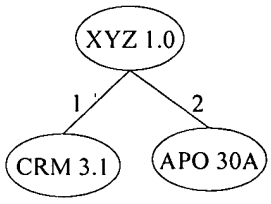


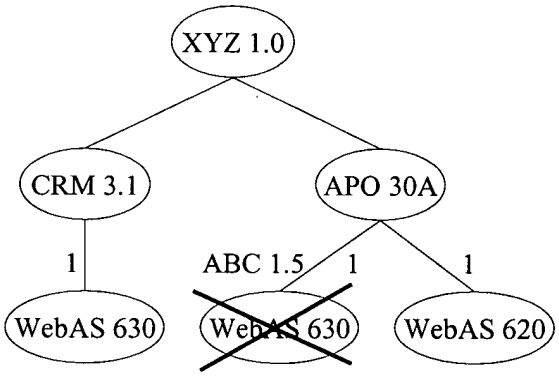

FIG. 29

*Level 1*:

*Level 2*:




*Level 3*:




# FIG. 30

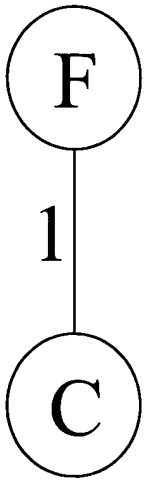



FIG. 31

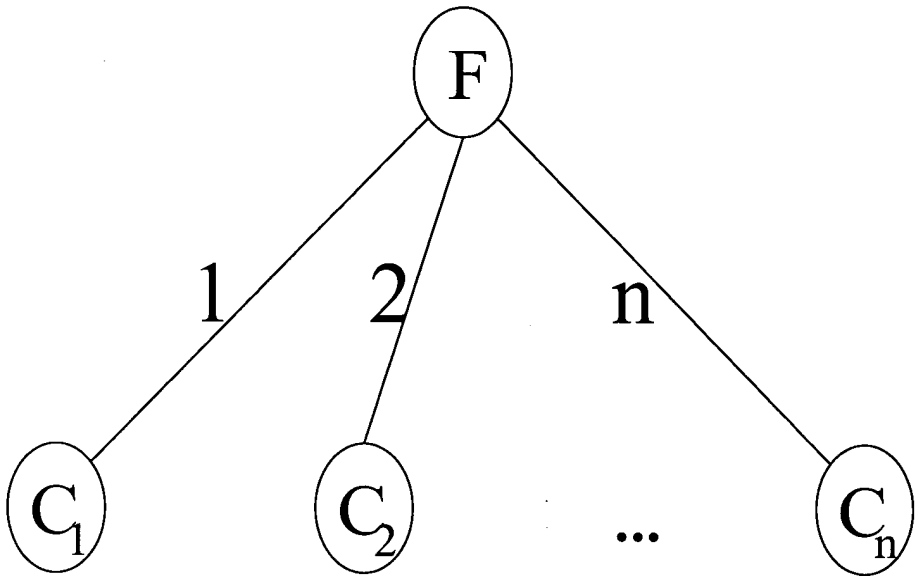



FIG. 32

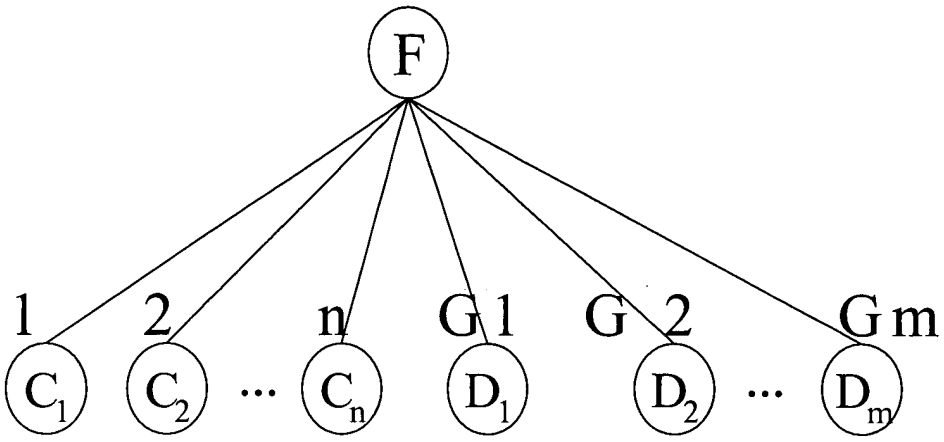



**FIG. 33**